

CORRESPONDENCE

First record of the genus *Basalys* Westwood, 1833 (Hymenoptera: Diapriidae) from China, with descriptions of two new species

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Abstract Two new species of the genus *Basalys* Westwood, 1833, *B. sinensis* sp. nov. and *B. leleji* sp. nov., are described and illustrated from Yunnan Province, China. A key to Chinese species of the genus is provided. Types are deposited in the Hymenopteran Collection of South China Agricultural University (SCAU).

Key words Hymenoptera, Diapriinae, *Basalys*, new species, Oriental, China.

The genus *Basalys* Westwood, 1833 belongs to the tribe Diapriini of the subfamily Diapriinae (Hymenoptera, Diapriidae). Currently it comprises 154 species (Norman, 1992; Rajmohana, 2004, 2006; Özdkmen, 2010; Notton, 2014), and distributes worldwide. In Oriental Region, seventeen species have been reported, including *B. besucheti* Huggert, 1982, *B. chotti* Rajmohana & Narendran, 2006, *B. cornutus* Huggert, 1982, *B. geobia* Huggert, 1982, *B. geoides* Huggert, 1982, *B. geus* (Rajmohana & Narendran, 1999), *B. karnatakensis* Sharma, *B. loebli* Huggert, 1982, *B. luzonica* Kieffer, 1914, *B. mandibularis* Rajmohana & Narendran, 2006, *B. monachanta* Kieffer, 1913, *B. philippinensis* (Kieffer, 1913), *B. rajmohanai* Özdkmen, 2010, *B. spinosiceps* Dodd, 1920, *B. tetratoma* (Kieffer, 1913), *B. unicus* Rajmohana & Narendran, 2006 and *B. variicornis* (Kieffer, 1913) (Kieffer, 1913; Dodd, 1920; Huggert, 1982; Rajmohana, 2004, 2006; Özdkmen, 2010). But there is not any species recorded from China before this study.

In this paper, two new species, *Basalys sinensis* sp. nov. and *Basalys leleji* sp. nov., which collected by yellow pan trap in Yunnan Province, is described herein.

Specimens were examined and described under a Leica MZ 12.5 stereomicroscope. All photos were taken with a digital camera (Cool SNAP) attached to the Zeiss Stemi 2000-CS stereomicroscope and processed by using Image-Pro Plus software, image post-processing by using Photoshop® software. All types are deposited in the Hymenopteran Collection of South China Agricultural University (SCAU). Morphological terminology follows that of Masner & García (2002). Measurements reported are relative, except for the body length and fore wing length.

In the descriptions, the following abbreviations are using:

A1, A2, etc—the first, second antennal segments, etc;

OOL—the shortest distance between a lateral ocellus and compound eye;

POL—the shortest distance between inner margins of two posterior ocelli;

syntergite—large tergite past petiole.

Genus *Basalys* Westwood, 1833

Basalys Westwood, 1833: 343; Ashmead, 1893: 407; Masner, 1964: 85; Kozlov, 1978: 594; Nixon, 1980: 10; Huggert, 1982: 189; Masner & García, 2002: 70; Rajmohana, 2006: 28. Type species: *Basalys fumipennis* Westwood, by monotypy.

urn:lsid:zoobank.org:pub:1EBAD0E9-DD7F-4596-9039-783133FF8272

Received 18 March 2016, accepted 30 June 2016

Executive editor: Fuqiang Chen

Diagnosis. Female antenna 11- or 12-segmented, with abrupt 3- or 4-segmented club. Male antenna 14-segmented. Pronotum usually with thick woolly collar. Notauli absent. Mesoscutellum with distinct basal fovea. Propodeum with area between median keel and plica almost glabrous. Fore wing always with distinct basal vein. Syntergite with anterior margin straight and complete, without notch or furrow (Masner & Gracía, 2002; Rajmohana, 2006).

Biology. Some of these tiny wasps were reared from Diptera puparia (Wright *et al.*, 1947; Notton, 1991). Several were collected in ant nests (Masner & Gracía, 2002; Loiácono *et al.*, 2013).

Distribution. Worldwilde.

Key to Chinese species of the genus *Basalys* (based on female).

1. Head 1.08 times as long as wide in dorsal view, 1.65 times as long as high in lateral view; head behind eyes slightly wider than mesosoma; eye 1.67 times as long as malar space; petiole with some longitudinal keels on dorsal surface *B. sinensis* sp. nov.
Head 0.86 times as long as wide in dorsal view, 0.92 times as long as high in lateral view; head behind eyes much wider than mesosoma; eye 2.27 times as long as malar space; petiole without longitudinal keels on dorsal surface *B. leleji* sp. nov.

***Basalys sinensis* sp. nov. (Fig. 1)**

Diagnosis. Head flattened and subrectangular in dorsal view; scape markedly widened at middle; antenna club 3-segmented.

Description. Female (Holotype). Body length 0.89 mm. Fore wing length 0.46 mm.

Colour. Head black. Antennae brown, with clubs blackish-brown. Mandibles reddish-brown. Mesosoma blackish-brown. Fore and hind wings hyaline, veins brown. Legs brown, with coxae, trochanters and first to fourth tarsi yellowish-brown. Metasoma blackish-brown.

Head. Head smooth and shining, with scattered hairs; subrectangular, 1.08 times as long as wide in dorsal view (8.1:7.5); 1.65 times as long as high in lateral view (8.1:4.8). Clypeus convex. Antennal shelf well developed, prominent anteriorly in lateral view. Antenna 12-segmented; club 3-segmented, strongly abrupt dorsally; relative ratio of length to width as follows: A1(11.0:3.0), A2(3.0:2.0), A3(1.0:1.0), A4(1.0:1.0), A5(1.0:1.0), A6(1.0:1.5), A7(1.0:1.5), A8(1.0:2.0), A9(1.5:2.0), A10(4.0:4.0), A11(4.0:3.5), A12(4.5:3.5). A1 markedly widened at middle. Toruli at level of lower margin of eye. Eye oval, with scattered hairs; 1.67 times as long as wide (9.5:5.7); 1.67 times as long as malar space (9.5:5.7). POL:OOL=2.0:3.0. Temple rounded in dorsal view, 0.62 times as long as eye (5.1:8.2). Postgenal cushion with tufts of hairs. Occipital carina complete.

Mesosoma. Pronotum with scattered hairs; with anterior margin straight in dorsal view. Epomium absent. Propleuron densely hairy. Mesoscutum smooth and shining, slightly convex, with scattered hairs; 0.64 times as long as wide (6.2:9.8). Notauli absent. Mesoscutellum with distinct transverse basal fovea. mesoscutellar disc subquadrate, smooth and shining, with scattered hairs, predominantly flat. Mesopleuron flat, smooth and shining, with scattered hairs. Sternaulus absent. Dorsellum smooth and shining, with scattered hairs. Metapleuron rugulose and densely hairy. Propodeum 0.57 times as long as wide (2.6:4.6), with strong longitudinal median keel and well defined pilca. Area between median keel and plica predominantly glabrous and smooth. Fore wing fully developed, surpassing apex of metasoma. Fore wing venation distinctly surpassing basal third of wing length, with stigmal vein moderate developed, and basal vein straight, perpendicular to but never contiguous with submarginal vein. Legs slender, with femora and tibia clavate; fore tibia without dorsal spine apically; tarsi not compressed.

Metasoma. Petiole cylindrical, densely hairy, 1.20 times as long as wide in dorsal view (6.6:5.5); 1.14 times as long as high in lateral view (6.6:5.8); with some longitudinal keels on dorsal surface. Syntergite slightly convex in lateral view. Syntergite with anterior margin straight and complete, not excised medially. Metasoma moderately pointed apically.

Male. Unknown.

Material examined. Holotype ♂, China, Yunnan, Zhaotong, Yongshan, Huanghua, V–X.2012, leg. Shiwen Yang (SCAU). Paratypes. 10♂, Yunnan, Zhaotong, Yongshan, Huanghua, VIII–X.2012, leg. Shiwen Yang; 10♂, Yunnan, Kaiyuan, VIII.2014, leg. Zi Hou (SCAU).

Biology. Unknown.

Distribution. China (Yunnan).

Remarks. This new species resembles *Basalys unicus* Rajmohana & Narendran, 2006 from India, but it can be separated from the latter by: antenna 12-segmented (11-segmented in *B. unicus*); head distinctly long than high in lateral view (almost quadrate in *B. unicus*); notauli absent (present but faint in *B. unicus*).

Etymology. The new species is named after the type locality, China.

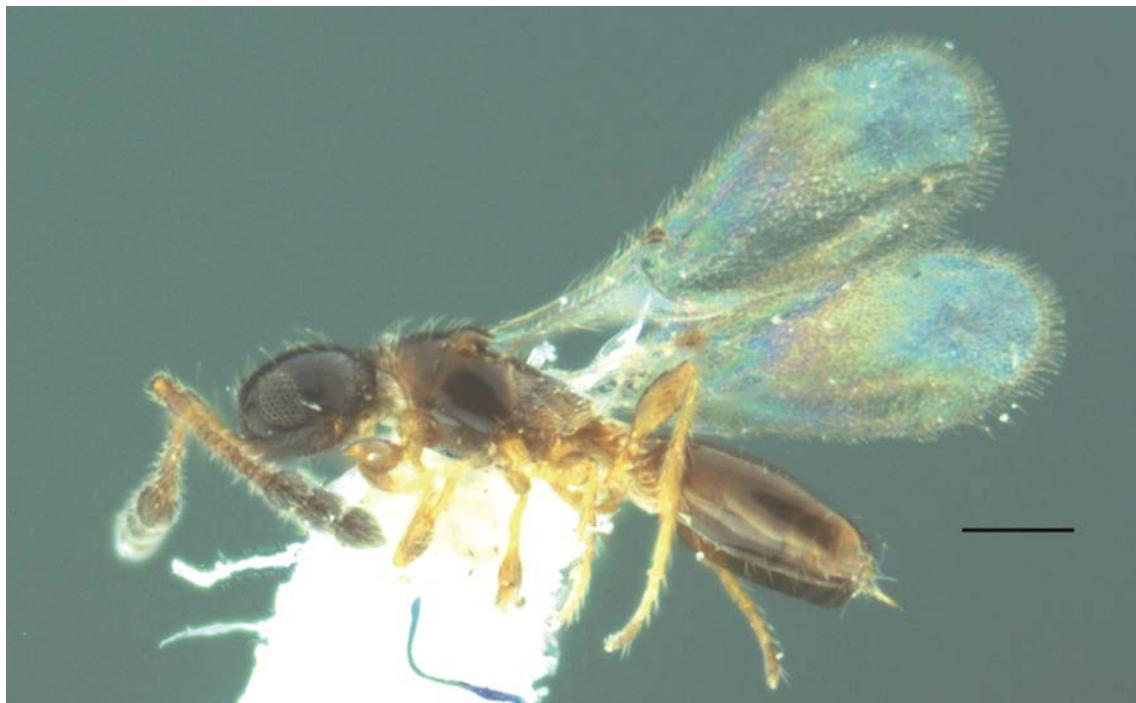


Figure 1. *Basalys sinensis* sp. nov., ♀, holotype, habitus, lateral view. Scale bar=0.2 mm.

***Basalys leleji* sp. nov. (Figs 2–3)**

Diagnosis. Head and mesosoma light brown; antenna clava club brown; metasoma brown; head in lateral view prolonged; antenna A10-A12 moderate clava; fore wing with apical margin shallowly incised.

Description. Female (Holotype). Body length 0.9 mm. Fore wing length 0.8 mm.

Color. Body brown with vertex blackish-brown. Fore and hind wings hyaline, veins brown. Legs light yellow.

Head. Head smooth and shining, with scattered hairs; 0.86 times as long as wide (12.0:14.0) in dorsal view; 0.92 times as long as high in lateral view (12.0:13.0). Clypeus slightly convex. Antennal shelf well developed, prominent anteriorly in lateral view. Antenna 12-segmented, with club 3-segmented; clavomeres flattened ventrally; relative ratio of length to width as follows: A1(12.0:2.0), A2(4.0:2.3), A3(1.5:1.5), A4(1.5:1.5), A5(1.5:1.9), A6(1.6:2.0), A7(2.0:2.0), A8(1.9:2.1), A9(2.0:2.5), A10(3.6:4.0), A11(3.9:5.4), A12(5.5:4.0). A1 unarmed apically, without sharp apical rim. A12 flat. Toruli at level of lower margin of eye. Eye oval and hairless; 0.93 times as long as wide; 2.27 times as long as malar space (5.0:2.2). POL:OOL=2.0:3.3. Temple rounded in dorsal view, 1.22 times as long as eye (6.0:4.9). Postgenal cushion with tufts of hairs. Occipital carina complete.

Mesosoma. Pronotum with scattered hairs; with curved anterior margin in dorsal view. Epomium absent. Propleuron sparsely hairy. Mesoscutum flat, smooth and shining, with scattered hairs; 0.80 times as long as wide (8.8:11.0). Notauli absent. Mesoscutellum with distinct basal fovea. Mesoscutellar disc subquadrate, smooth and shining, with scattered hairs, predominantly flat. Mesopleuron almost flat, with scattered hairs. Sternaulus absent. Dorsellum sparsely hairy, with three short keels. Metapleuron rugulose and hairy. Propodeum 0.62 times as long as wide (3.8:6.1), with strong longitudinal median keel and well defined pilca. Area between median keel and plica predominantly glabrous and smooth. Fore wing fully developed, surpassing apex of metasoma. Fore wing venation distinctly surpassing basal third of wing length, with stigmal vein developed, and basal vein straight, fully pigmented, perpendicular to but never contiguous with submarginal vein. Legs slender, with femora and tibia clavate; fore tibia with one dorsal spine apically; tarsi not compressed.

Metasoma. Petiole cylindrical, 1.41 times as long as wide in dorsal view (4.1:2.9); 1.11 times as long as high in lateral view; without longitudinal keels on dorsal surface; sparsely hairy ventrally. Syntergite slightly convex in lateral view; anterior margin with narrow stripe of pilosity. Syntergite with anterior margin straight, not excised medially. Metasoma moderately pointed apically.

Male. Antenna 14-segmented; relative ratio of length to width as follows: A1(11.0:2.2), A2(5.0:2.7), A3(4.0:2.1), A4(4.0:2.0), A5(4.0:2.0), A6(4.1:2.0), A7(3.9:2.5), A8(4.0:2.3), A9(4.0:2.8), A10(4.0:2.5), A11(3.2:2.3), A12(3.7:2.1),



Figures 2–3. *Basalys leleji* sp. nov., habitus, lateral view. 2. ♀, holotype. 3. ♂, paratype. Scale bar=0.2 mm.

A13(3.5:2.9), A14(5.0:3.0). A2 oval. A4 not sexually modified. A5–A14 with scattered hairs. Metasoma blunt apically. Other characteristics similar to females.

Material examined. Holotype ♂, China, Yunnan, Zhaotong, Yongshan, Huanghua, VIII–X.2012, leg. Shiwen Yang (SCAU). Paratypes. 20♂, 6♀, same data as holotype (SCAU).

Biology. Unknown.

Distribution. China (Yunnan).

Remarks. This new species is similar to *Basalys chotti* Rajmohana & Narendran, 2006 from India, but it can be separated from the latter by: A11 0.72 times as long as wide (1.20 times as long as wide in *B. chotti*); notauli absent (present but faint in *B. chotti*); petiole 1.41 times as long as wide (almost as long as wide in *B. chotti*).

Etymology. This new species is named after Dr. Arkadiy Lelej to celebrate his 70th birthday.

Funding This study was supported by the National Natural Science Foundation of China (31272351, U0936601).

Acknowledgements The authors would like to thank Shiwen Yang for his assistance of collecting the wasps from Yunnan Province.

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